

REMARKS

Reconsideration is respectfully requested.

Entry of the above amendments is courteously requested in order to place all claims in this application in allowable condition and/or to place the non-allowed claims in better condition for consideration on appeal.

Claims 3, 4, 8 through 31 and 38 through 43 remain in this application. Claims 1, 2, 5 through 7, and 32 through 37 have been cancelled. No claims have been withdrawn. Claims 44 through 47 have been added.

The Examiner's rejections will be considered in the order of their occurrence in the Office Action.

Paragraphs 2 through 4 of the Office Action

The drawings have been objected to.

The drawing amendment (the addition of a new Figure 6) submitted November 2001 has not been entered, and is hereby withdrawn.

The new Figure 6 that was supposed to be submitted with the Amendment of February 2, 2006 was not found, and therefore was not entered. Submitted with this Amendment is a new "new sheet" of drawings with a new Figure 6, and entry of this new Figure is respectfully requested.. It is submitted that the depiction in the proposed new Figure 6 is fully supported by the application as filed, particularly the portion of the disclosure contained in paragraphs [0014] and [0015] (as designated in the U.S. Patent Application Publication 2002/0121413 for this application). It is also submitted that Figure 6 shows the elements set forth in paragraph 4 of the Office Action and as included in the claims.

An amendment of the "Brief Description of the Drawings" has been made in the specification to correspond to the amendment of the drawings. Further, a paragraph has been added to the "Detailed Description" portion of the application to support the reference numbers shown in added Figure 6. It is noted that the text added to the Detailed Description substantially corresponds to the text of paragraph [0014].

In light of the proposed drawing amendment, it is therefore submitted that the objection to the drawings as originally filed has been overcome, and withdrawal of the objection to the drawings is respectfully requested.

Paragraph 5 of the Office Action

Applicant's amendments to the specification submitted February 2, 2006 have been objected to, since the new Fig. 6 referred to in the amendments to the specification was not found. The amendments to the specification were therefore not entered.

The above amendment requests the entry of the previously requested specification amendments, and in light of the new Figure 6 submitted with this Amendment, entry of the amendments to the specification is respectfully requested.

Paragraph 6 of the Office Action

Claim 4 has been objected to for the informalities noted in the Office Action.

Claim 4 has been amended in a manner believed to clarify any informalities in the language. Specifically, in line 11 of the claim, the word "collective" now reads --collectively--.

Withdrawal of the objection to claim 4 is therefore respectfully requested.

Paragraph 7 of the Office Action

Claim 9 has been objected to for the informalities noted in the Office Action.

Claim 9 has been amended in a manner believed to clarify any informalities in the language. Specifically, the dependency of claim 9 has been changed back to its original form.

Withdrawal of the objection to claim 9 is therefore respectfully requested.

Paragraph 8 of the Office Action

The numbering of claims has been objected to for not preserving the original numbering of the claims throughout the prosecution.

Old claims 32 through 37 have been identified as cancelled, and the claims that were new presented in the Amendment of February 2, 2006 as claims 32 through 37 have been renumbered as claims 38 through 43.

Withdrawal of the objection to the numbering of the claims is therefore respectfully requested.

Paragraph 9 and 10 of the Office Action

Claims 30 and 38 through 43 (renumbered claims 32 through 37) have been rejected under 35 U.S.C. §112 (second paragraph) as being indefinite.

The above amendments to claims 30, 38, and 43 are believed to clarify the requirements of the rejected claims, especially the particular points identified in the Office Action.

Withdrawal of the §112 rejection of claims 30 and 38 through 43 (renumbered claims 32 through 37) is therefore respectfully requested.

Paragraph 11 and 12 of the Office Action

Claims 38 through 43 (renumbered claims 32 through 37) have been rejected under 35 U.S.C. §102(b) as being anticipated by Harris.

Claim 38, particularly as amended, requires “a housing defining an interior” and “a piston positioned in the interior of the housing and being mounted on the rod of the shock absorber to move with the rod”.

The rejection of the claims in the Office Action is based upon the interpretation of the sleeve 40 of the Harris patent as the claimed “housing”. However, it is submitted that the sleeve 40 of Harris does not constitute a “housing defining an interior”, as required by claim 38, and would not lead one of ordinary skill in the art to the claimed housing. More specifically, the sleeve 40 of the Harris patent is a wall that, while curved to a certain degree, does not form any housing that would define an interior. In fact, the sleeve 40 of Harris specifically and intentionally comprises at most a semi-cylindrical wall so that it can serve the purpose of deflecting the flexible member 30 to one side as the flexible member moves along the sleeve. The limited extension of the sleeve, and the desired result of that limited nature, is made clear by Harris at col. 4, line 47 through col. 5, line 14 that (emphasis added):

FIG. 2 is taken along line 2--2 on FIG. 1 to more clearly show the structure of the partial restraining sleeve 40. The restraining sleeve must cover only a portion of the circumference of the flexible member 30 in order to create the desired side loading force F' . The embodiment illustrated in FIG. 2a, the restraining sleeve, covers approximately 120° of the circumference of the flexible member. The amount of side load compensating force provided by the restraining cylinder is roughly proportional to the proportion of the circumference of the flexible member which is restrained by the restraining sleeve. In theory, it is believed that as low as point contact up to half or 180° of the circumference may be effective to create some force. Obviously, beyond 180° of coverage there is proportionally less side loading force directed in the desired direction due to off setting force vectors on opposite sides of the restrained flexible member 30. Such a configuration might be useful in certain specific applications. Preferred is 30°-180°, more preferred is 45°-130°, most preferred is

50°-120°. The positioning of the contact area of the restraining sleeve is critical since the side load compensating force delivered is normal to the center of the contact area between the restraining sleeve and the flexible member. That is to say that if there is a force that is to be counter balanced by the restraining sleeve, the sleeve should be positioned diametrically opposite the focal point of that force.

It is submitted that one of ordinary skill in the art would be led away from “a housing defining an interior” by the disclosure of Harris with respect to the shield and its necessary function in the operation of the flexible member 30.

Further, claim 38 requires “an air-bag positioned *within the interior of the housing*, the air bag being constructed of elastomeric material, the air-bag having *a first end mounted on the housing in the interior of the housing* and a second end mounted on the piston such that the piston, the housing, and the air bag collectively define an air chamber within the housing” (emphasis added).

The rejection of claims 38 et al. points to the flexible member 30 as allegedly anticipating the claimed air-bag. However, it is submitted that the flexible member 30 does not satisfy the requirement of claim 38 with respect to the air-bag. More specifically, the flexible member 30 is not positioned *within* the interior of a housing, even if one believes that the sleeve 40 of Harris does comprise some sort of housing. At least a portion of the flexible member 30 of Harris is clearly outside of an “interior” that might be argued (by one believing that the sleeve is a housing) to be created by the sleeve 40, and the Harris patent explicitly states that the sleeve should only extend (at the most) about 180 degrees of the flexible member, with the remaining portion of the flexible member protruding out from the sleeve and being able to move outwardly from the sleeve. This is shown in particularly great detail in Figures 2 and 2A of the Harris patent, which illustrates the maximum extent of the sleeve 40 about the flexible member 30. The discussion in Harris even states that a point contact by the sleeve

on the flexible member might be sufficient, which leads one of ordinary skill in the art even further away from the claimed invention.

Further, as shown in Figure 1 of the Harris patent, a significant portion of the top end of the flexible member and a bottom end of the flexible member is located outside of the sleeve 40 (see especially the left side of the flexible member in Figure 1).

It is therefore submitted that the Harris patent would not lead one of ordinary skill in the art to the applicant's claimed invention as defined in claim 38, especially with the requirements set forth above, and therefore it is submitted that claim 38 is allowable over the prior art. Further, claims 39 and 43, which depend from claim 38, claims 40 and 41, which depend from claim 39, and claim 42, which depends from claim 41, also include the requirements discussed above and therefore are also submitted to be in condition for allowance.

Withdrawal of the §102(b) rejection of claims 38 through 43 is therefore respectfully requested.

Paragraphs 13 through 15 of the Office Action

Claim 3 has been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Jurrens in view of Valdespino.

Claim 3 requires in part "the air-bag is housed within a housing assembly and is secured at one end to a piston located within the housing assembly and is secured at an other end to an upper plate or end cap of the housing assembly".

In the "Response to Arguments" portion of the Office Action, it is alleged that:

While applicant is correct that Valdespino is silent as to the specifics of the air bag 46 and its securement to end cap 43 and piston 50, the examiner maintains that inherently the bladder would have to

be secured to these components. In order for the air bladder 46 to properly function, it would have to be adequately secured and maintained between cap 43 and 50 and thus, given the scope of applicant's claim language, since bladder 46 contacts cap 43 and piston 50, it is readable as being secured to these components. Applicant's comments with respect to Figure 9 of the Valdespino reference are unfounded as Figure 9 is a separate embodiment of the invention not relied upon by the examiner in her rejection.

However, contrary to the allegation in the Office Action, it is submitted that it is not "inherent" that the bladder would "have to be secured to these components". More specifically, it is submitted that one of ordinary skill in the art would recognize that there is no necessity that the bladder of Valdespino be "secured" to the piston. The Examiner does not provide any explanation why it is believed that the "air bladder to properly function...would have to be adequately secured and maintained between cap 43 and 50" (emphasis added), as alleged in the rejection. Further, it certainly is possible, and indeed is highly likely, that Valdespino relies only upon air pressure in the bladder 46 to maintain the bladder in "contact" with the elements 43 and 50 of the embodiment shown in Figure 6. (It should be noted that, in contrast to the secured relationship in the claimed invention in which the air bag acts on the piston in two directions, the air pressure in the bladder of Valdespino would only exert force on the element 50 in one direction.) There is nothing in the Valdespino patent that teaches or suggests that some type of securement between the bladder 46 and elements 43 and 50 is necessary for the device to function. It is submitted that the function of bladder 53 located at the bottom of the cylinder and acting on disc 52 would make any such securement superfluous to the overall function of the device. Still further, even if one takes the position that the hose 54 somehow creates some securement between the bladder 46 and disc 50, this interpretation would still not satisfy the additional requirement of claim 3 that "the air-bag.... is secured at an other end to an upper plate or end cap of the housing assembly".

Also, it is submitted that simply because there may be “contact” between elements does not mean that the elements are secured together—to interpret “secured” to include elements that simply contact one another is to simply ignore the clear meaning of “secure”. It is further submitted that one of ordinary skill in the art recognizes that the term “secured” requires greater connection than mere “contact” would provide. Consequently, it is submitted that the interpretation of “secure” as including mere “contact between parts is an unreasonably broad interpretation of the term.

With respect to the comments in the earlier response with regard to Figure 9 of Valdespino, those comments were made in light of the requirement that a reference must be considered from the standpoint of what it discloses in its entirety, and while what is shown in Figure 9 is another embodiment, that does not mean that it can be completely removed from the understanding of one of ordinary skill in the art. The Examiner has taken the position that the “air bladder to properly function...would have to be adequately secured and maintained between cap 43 and 50” (emphasis added), and Figure 9 shows one of ordinary skill in the art, considering the Valdespino patent, *in its entirety*, that it is not necessary for an air bladder 61 to be “secured” to the disc 50 “to properly function”.

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of Jurrens and Valdespino set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant’s invention as required by claim 3 and therefore is also submitted to be in condition for allowance.

Withdrawal of the §103(a) rejection of claims 3 is therefore respectfully requested.

Paragraphs 13 through 15 of the Office Action

Claims 4 and 8 through 31 (renumbered claims 32 through 37) have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Jurrens in view of Harris.

Claim 4 requires, in part “the air-bag is *housed within* a housing assembly and is secured at one end to a piston located within the housing assembly and at an other end to an end cap of the housing assembly such that the piston, the end cap, and the air bag collectively define an air chamber within the housing for receiving and retaining air” (emphasis added). Claim 17 requires “the housing assembly *enclosing* the air-bag, and the first end of the air-bag secured to a piston located within the housing assembly and the second end of the air-bag secured to the end cap such that the piston, the end cap, and the air bag collectively define an air chamber within the housing” (emphasis added). Claim 31 requires “the air bag suspension including a housing with an interior” and “an air bag *positioned in the interior* of the housing” (emphasis added).

It is conceded in the rejection of the Office Action that:

Regarding Claim 4, Jurrens et al is relied upon as applied to Claim 3 above. However, again, Jurrens et al do not disclose that the piston is located within the housing assembly such that the piston, the end cap, and the air bag collectively define an air chamber within the housing for receiving and retaining air.

But it is then contended that:

Harris is relied upon merely for his teachings of an air bag suspension system (see Figure 1) forming a shock absorber which includes at least one air bag 30, the air bag is housed within a housing assembly 40 and is secured at one end to a piston 14 located within the housing assembly and at an other end to an end cap 26 of the housing assembly.

However, as noted above, the Harris patent shows a sleeve 40 that only partially extends about the flexible member 30, and therefore it is submitted that the flexible member does not show an “air-bag [] housed within a

housing” (as required by claim 4), or a “housing assembly enclosing the air-bag” (as required by claim 17, or “an air-bag positioned in the interior of the housing” (as required by claim 31).

It is further alleged in the rejection of the Office Action that
(emphasis added):

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the air bag suspension system of Jurrens et al to include an air bag housed within a housing assembly that is secured at one end to a piston located within the housing assembly as taught by Harris as an alternate means of damping the motorcycle to simplify the overall air bag suspension design and to reduce the overall number of parts to the assembly. By constructing the air bag and shock absorber as one piece, a reduction in cost and simplicity of manufacture can be achieved.

However, it is not understood why one of ordinary skill in the art would find the addition of the shield of Harris into the structure of the Jurrens ‘628 patent would “simplify the overall air suspension design” and “reduce the overall number of parts” as asserted above. Typically, the addition of more structure to a structure is understood to make the design more complex and increase the number of parts, instead of the assertions made above. Furthermore, and more importantly, it is not seen where anything in the Harris patent suggests that its system is simpler with fewer parts than existing structures. It is therefore submitted that one of ordinary skill in the art would arrive at the conclusion set forth in the rejection based solely upon the prior art and the knowledge of one of ordinary skill in the art.

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of Jurrens and Harris set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant’s invention as required by claim 4, 17 and 31.

Withdrawal of the §103(a) rejection of claims 4 and 8 through 31 is therefore respectfully requested.

Appln. No. 09/753,591
Amendment dated August 7, 2006
Reply to Office Action mailed April 6, 2006

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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Amendments to the Drawings

The attached sheet of drawing is a “new sheet” with a new Figure 6.

Attachment: New Sheet